UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF: SE-5J

MEMORANDUM

DATE:

SUBJECT: ACTION MEMORANDUM request for an Emergency Removal Action at the Tilton Plating Site, Vermilion County, Tilton, Illinois (Site ID# B589)

FROM: Cindy Nolan, On-Scene Coordinator
Emergency Response Section II

THRU: Richard Karl, Chief
Emergency Response Branch

TO: William E. Muno, Director
Superfund Division

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval to expend up to $509,000 to abate a substantial threat to public health and the environment posed by plating waste left unsecured both inside and outside at the abandoned Tilton Plating Site, 305 Fairfield, Tilton, Vermilion County, Illinois. This memorandum also seeks to confirm and document the verbal authorization of $50,000, which was approved by the Chief of the Emergency and Enforcement Response Branch (EERB) on September 25, 1998, for an emergency stabilization response that was conducted by the Emergency and Rapid Response Services (ERRS) Contractor. This emergency response action involved removing all drums and other containers (approximately 20) from their outdoor location and staging them within the building according to pH. The building doors were secured and the doorknob on one door was replaced to allow the building to be locked.

The emergency response action temporarily abated the potential release of contaminants including various acids, chromium, cyanide, caustic liquids and solids, and formaldehyde that were identified by labels and field testing methods. Other wastes also exist on site that have not yet been identified. This response action was performed under Section 104 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. Section 9604. The hazardous materials remain stored in deteriorated drums, jars, and open vats in a building that has been condemned by Vermilion County. There is no fencing around the site.

This site is not on the National Priorities List.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID#: ILSFN0507790

A. Site Description

1. Background

The Tilton Plating site is a defunct plating facility located in a residential neighborhood in Tilton, Vermilion County, Illinois. The years of operation of the Tilton Plating site are unknown, although water violations for the site date back to 1992. According to the resident who lives adjacent to the site to the south, the facility was in operation for at least 20 years. The Illinois Environmental Protection Agency (IEPA) has site maps dating back to 1975 with buildings on them, but whether the site operated as a plating facility at that time is not known. Tilton Plating was incorporated on January 24, 1994, and was involuntarily dissolved on June 1, 1995. The current owner of the site property is Dale Newmister. The past operator of the site was Bill McDonald.

IEPA was first notified of the Tilton Plating site in 1992, when a neighbor to the south of the site informed the IEPA that two of his dogs had died. One autopsy, dated October 29, 1992, revealed the dog's death was attributed to toxic levels of heavy metals.

2. Physical location

The facility is located at 305 Fairfield Street, Tilton, Vermilion County, Illinois (Figure 1) and consists of a 40-foot by 40-foot building and surrounding land. Coordinates for the site are latitude 40°6'12" N and longitude 87°38'44" W. The site is bordered by a residence to the south, residences to the north, an open field to the east, and a railroad to the west (Figure 2). Immediately west of the building, the property drops 15-20 feet in elevation toward a water-filled ditch along the railroad. The area surrounding the facility is residential. The Village of Tiltons Athletic Stadium is approximately 1/4 mile from the site and all traffic to the stadium, whether vehicular or pedestrian must pass the site, which is an egress point.

3. Site Characteristics

The building is in a severe state of deterioration, has a leaky roof and several holes in the walls. Both doors to the building are in deteriorated condition. Approximately 25 drums and other containers of hazardous materials were stored unsecured outside of the building. Approximately 50 additional drums, containers,

and several open plating vats were located inside the building (Figure 3).

At the western base of the building there is an eroded hole, possibly from the hazardous materials located inside of the building. An erosion pathway from the hole and a lack of vegetation where the pathway extends down the ravine may indicate the migration of materials from the plating shop. Floor drains inside of the building have large holes eroded that expose possible contaminated soils under the building. The floor of the building is eroded and crumbling. An exhaust vent is located at the top of the west wall of the building. The south exterior wall has significant green-blue staining and the west wall has yellow-brown staining. The building has been condemned by the Village of Tilton. The adjacent residential properties may have possible soil contamination as well.

According to the attached Environmental Justice Study, the group of residents closest to the Site reside in census tract #010701, block group #3. Demographics for residents in this census block group are 48 % low income and < 1% minority. The percentages in the State of Illinois for both low income and minority are 27% and 25%, respectively, and exceeding one of these values by two times would cause the Site to be a high priority environmental justice community. Based on this information, this Site, therefore, is considered a medium priority community because the low income percentage is greater than the Illinois Statewide percentages of 27% low income, but not more than two times or 54%.

B. <u>Other Actions to Date</u>

1. Previous Actions

IEPA was first notified of the Tilton Plating Site in 1992. On April 18, 1995, IEPA collected soil samples around the site with a drill rig. IEPA found high levels of barium around the entire site and east of the site across Fairfield Road on residential property. Hazardous levels of lead, cadmium, and chromium were also found along the west edge of the property.

On September 15, 1998, IEPA conducted a site investigation of Tilton Plating. During the investigation, IEPA took a site inventory of chemical containers, collected soil samples, took x-ray fluorescence (XRF) readings of soil to determine metal content, and collected vat and drum samples which were later tested for pH with a pH meter. The highest XRF readings for lead and chrome were 1729.6 parts per million (ppm) and 3980.8 ppm, respectively. The pH readings ranged from <1 to 2.6. The soil, vat, and drum samples were sent out to a laboratory for various analyses. These analyses currently are not available and will not be for several weeks.

2. Current Actions

On September 21, 1998, Bruce Everetts, Remedial Project Manager, Site Assessment Unit, IEPA, sent a letter to U.S. EPA requesting assistance at the Tilton Plating Site. On September 25, 1998, U.S. EPA On-Scene Coordinator (OSC) Cindy Nolan, IEPA representatives Mark Weber and Neelu Reddy, and two members of the Superfund Technical Assistance and Response Team (START) conducted a site assessment. Numerous drums were spotted outside on the north side of the building. Labels noted on the drums were "corrosive," "hydrochloric "acid," "nitric acid," and "formaldehyde." There were also several small containers strewn throughout. Field testing conducted from a container labeled "zinc cyanide" tested positive for cyanide. Materials were tested for pH using pH paper with results ranging from <1 to 2.6. START video-taped the hazards present inside of the building. An inventory was taken of the hazardous materials in the building. After the initial assessment, OSC Nolan determined that an emergency stabilization was necessary at the site. A call was made to U.S. EPA on September 25, 1998, and a $50,000 verbal approval to proceed was given by Tom Geishecker, Emergency and Enforcement Branch. The ERRS Contractor was contacted that day and requested to respond to and stabilize the site. Activities included locating and moving all drums and containers from outside and staging them inside of the building on site according to pH. Without the necessary means to overpack drums, only one severely damaged acid drum was over packed. All the drums, vats and containers remain on site inside of the condemned building.

No samples were sent to a laboratory for analysis during this site assessment. Field tests for pH indicated that the corrosive drums were acidic and pH levels ranged from <1 to 2.6. The containers labeled as "zinc cyanide" did contain cyanide as a result of the Merck EM Quant Test Kit.

3. Work to be performed

The most feasible and economical way to address this site is in three phases: Phase I, which consisted of the emergency stabilization that occurred on September 25, 1998; Phase II, which will include mobilization of personnel and equipment, container sampling, compatibility and bulk testing, waste consolidation, disposal bidding, disposal of all the hazardous materials, sampling of the building, decontamination, demolition and disposal of the building if deemed necessary; and Phase III, to be conducted in the Spring of 1999, will include conducting a soil extent of contamination (EOC) study, sampling of residential soils, excavation of any soils above clean-up levels, and backfilling the area. The removal action will not be continuous and three phases are necessary at the site because the hazardous

chemicals need to be addressed immediately. The winter months and possible freezing weather conditions may make it impossible to conduct the necessary soil sampling and excavation of the soil.

III. THREATS TO PUBLIC HEALTH OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The conditions observed at the Tilton Plating site present an imminent and substantial threat to human health, welfare and the environment, and meet the criteria for a removal action as stated in the National Contingency Plan (NCP), 40 C.F.R. § 300.415(b)(2), specifically:

a) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

Materials exhibiting RCRA hazardous waste characteristics of corrosivity have been identified in drums and vats on site. A corrosive waste is any liquid which has a pH less than 2 or greater than 12.5, as specified in 40 C.F.R. § 261.22. Contact with corrosive materials could result in chemical burns to the skin and eyes. These materials corrode metal containers and concrete if not properly maintained and could result in a strong reaction if materials of incompatible pH are mixed.

The site investigation and emergency stabilization on September 25, 1998 revealed numerous drums, several of which were field tested for pH and found to contain acids with pH ranging from <1 to 2. Numerous drums, both inside and outside of the facility, were labeled as acid. A small container labeled "zinc cyanide" was found on site. Field testing on site revealed a positive result for cyanide. There are also other containers labeled "cyanide" on site. A drum of formaldehyde was found outside and unsecured on the site. Formaldehyde has a B1 classification, which makes it a probable human carcinogen.

Approximately 25 drums of hazardous materials had been left outdoors, overturned, and unsecured. Of these drums, only one was over packed during the emergency stabilization. The remaining drums and containers (approximately 50) were staged securely, according to field testing pH, inside the building during stabilization activities. However, several of these drums are of poor integrity and will need to be over packed immediately because they currently are stored in a building that has been condemned by the Village of Tilton. Approximately 75 drums and containers containing hazardous materials presently are staged throughout this condemned building.

Although the drums in the worst condition have been temporarily staged, actual or potential exposure to humans and animals

remains because the site may be subject to unauthorized access, is unsecured, is located in a residential neighborhood, and is in close proximity to the stadium.

b) Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release;

The presence of approximately 75 drums, vats, and smaller containers of acids, cyanides, caustic liquids and solids, formaldehyde, and various other unidentified wastes may pose a threat of release at the facility. Improper storage of these containers has resulted in severe deterioration, and several need to be over packed immediately. Drums are strewn throughout the building haphazardly, with debris piled on top of them. Releases of drummed material have been observed and documented by U.S. EPA and are evident by the corroding floor inside of the building. Increased leakage from containers could result in mixing of cyanides and acids, causing the release of lethal hydrogen cyanide gas. The facility's deteriorated structure and leaky roof increase the potential for accumulation of rainwater and further release of material from the drums and open vats.

c) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;

This threat is present at the facility due to the continued deterioration of the building, specifically the leaking roof. Open vats, containers, and decomposing drums containing acids, cyanides, caustic liquids and solids, plating waste, and other unidentified wastes have been documented on site. Continued exposure of the drums, containers, and vats to the natural elements will accelerate deterioration and release of their contents. Further release of the drums' contents could cause mixing of incompatible materials, which might result in violent chemical reactions. Rainwater has accumulated inside of the building and around the deteriorating drums. Migration is also evidenced by a hole having developed, as a result of deterioration, at the base of the building. This hole is a migration pathway of materials from the plating shop, which can be seen from the lack of vegetation where the pathway extends down the ravine. The three floor drains that are located in the building have large holes that eroded the floor and exposed soils under the building.

d) Threat of fire or explosion;

This threat is present at the site due to the close proximity of strong acids and bases to one another. The corroding containers plus exposure to the elements can create a potential for the occurrence of an exothermic (heat-releasing) reaction at the

facility.

e) the unavailability of other appropriate Federal or State response mechanism to respond to the release;

The actions proposed by this Memorandum at the Tilton Plating facility cannot be undertaken by the IEPA due to a lack of resources necessary to respond to this time-critical situation. A letter from Bruce Everett, IEPA, requesting Federal assistance was received by the Emergency Response Branch on September 21, 1998.

IV. ENDANGERMENT DETERMINATION

Access to the site is not restricted. The building is in a severe state of deterioration, has been condemned, and continues to be accessible to animals and humans. The hazardous materials presently stored inside of the building, the visible soil contamination plus the fact that two neighboring dogs have died represent an imminent and substantial endangerment to the community. Therefore, given the site conditions, the nature of the hazardous substances on-site, and the potential pathways described in Sections II and III above, actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

The OSC has begun planning for the provision for post-removal site control, consistent with the National Contingency Plan (NCP), 40 C.F.R. § 300.415(b)(2). The following actions are proposed to mitigate the potential and actual threats to human health and the environment posed by the hazardous contaminants at the site:

1) Develop and implement a health and safety plan to address removal activities;

2) Locate and stage all drums in a secure area;

3) Sample drummed materials, categorize contaminants according to the hazards they pose, and bulk compatible hazardous materials together;

4) Sample the floors and walls of the building to determine the presence or absence of contamination, which can then be used to determine if demolition is necessary;

5) Decontaminate, demolish, and dispose of the building, if

necessary;

6) Sample soil under and adjacent to the site building and the adjacent residential property to determine if levels of hazardous substances and contaminants are above appropriate clean-up levels;

7) Excavate any contaminated soil above clean-up levels and backfill the area;

8) Arrange for disposal of all hazardous substances at an EPA-approved facility in accordance with U.S. EPAs Off-Site Rule (40 C.F.R. § 300.440);

Detailed Cleanup contractor costs are presented in Attachment 1. The requested cost adjustment estimated for this Action Memo (rounded to the nearest thousand) is summarized in the Project Cost Table estimate below:

REMOVAL PROJECT CEILING ESTIMATE

EXTRAMURAL COSTS:

Cleanup Contractor Costs	$284,381
Contingency (20%)	56,876
Subtotal	$341,257
Total START Costs	37,624
Extramural Subtotal	$378,881
Extramural Contingency (20%)	75,776
TOTAL EXTRAMURAL COSTS	$454,657

INTRAMURAL COSTS:

U.S. EPA Direct Costs ($30/HR X 600 hours)	$ 18,000
U.S. EPA Indirect Costs ($60/hr x 600 hours)	36,000
TOTAL INTRAMURAL COSTS:	54,000
TOTAL REMOVAL PROJECT CEILING	**$508,657**
Rounded to the nearest thousand	$509,000

The response actions described in this memorandum directly address actual or threatened releases of hazardous substances, pollutants, or contaminants at the Tilton Plating Site, Tilton, Vermilion County, Illinois, which may pose an imminent and substantial endangerment to public health, safety, and the environment.

The response actions described in this memorandum do not impose a burden on affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

The On-Scene Coordinator has begun planning for provision of post-removal site control, consistent with the provisions of the NCP set forth at 40 C.F.R. § 300.415(l).

A letter requesting State ARARs was sent to Mark Weber, IEPA, on October 8, 1998. Any state ARARs identified in a timely manner for this removal action will be complied with to the extent practicable.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Due to unrestricted site access, the deteriorating building, and the storage of approximately 75 drums, open vats and containers at the site, delayed action may result in the potential release of the hazardous substances at the site.

VII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues associated with this site.

VIII. ENFORCEMENT

For administrative purposes, information concerning the enforcement strategy for this site is contained in an Enforcement Confidential Addendum.

IX. RECOMMENDATIONS

This decision document represents the selected phased removal action for the Tilton Plating Site in Tilton, Vermilion County, Illinois and was developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the site (Attachment 3). Conditions at the site continue to meet the NCP, Section 300.415(b)(2) criteria for a removal action and approval of the proposed removal action is recommended. The estimated removal project costs are $509,000, of which $285,000 may be used for clean-up contractor costs. You may indicate your decision by signing below.

APPROVED: _____ DATE: 12/14/98
Director for Superfund

DISAPPROVED: _____ DATE: _____
Director for Superfund

Attachments:
A. Detailed Cleanup Contractor Cost Estimate
B. Enforcement Confidential Addendum
C. Administrative Record Index
D. Environmental Justice Analysis

cc: K. Mould, U.S. EPA HQ, 5202G
M. Chezik, U.S. Department of Interior, **w/o Enf. Addendum**
M. Weber **w/o Enf. Addendum**
Illinois Environmental Protection Agency
1021 North Grand Ave. East
P.O. Box 19276
Springfield, Illinois 62794-9276

TILTON PLATING SITE

DETAILED CLEANUP CONTRACTOR COST ESTIMATE

1 PAGE

REDACTED

NOT RELEVANT TO THE SELECTION OF REMOVAL ACTION

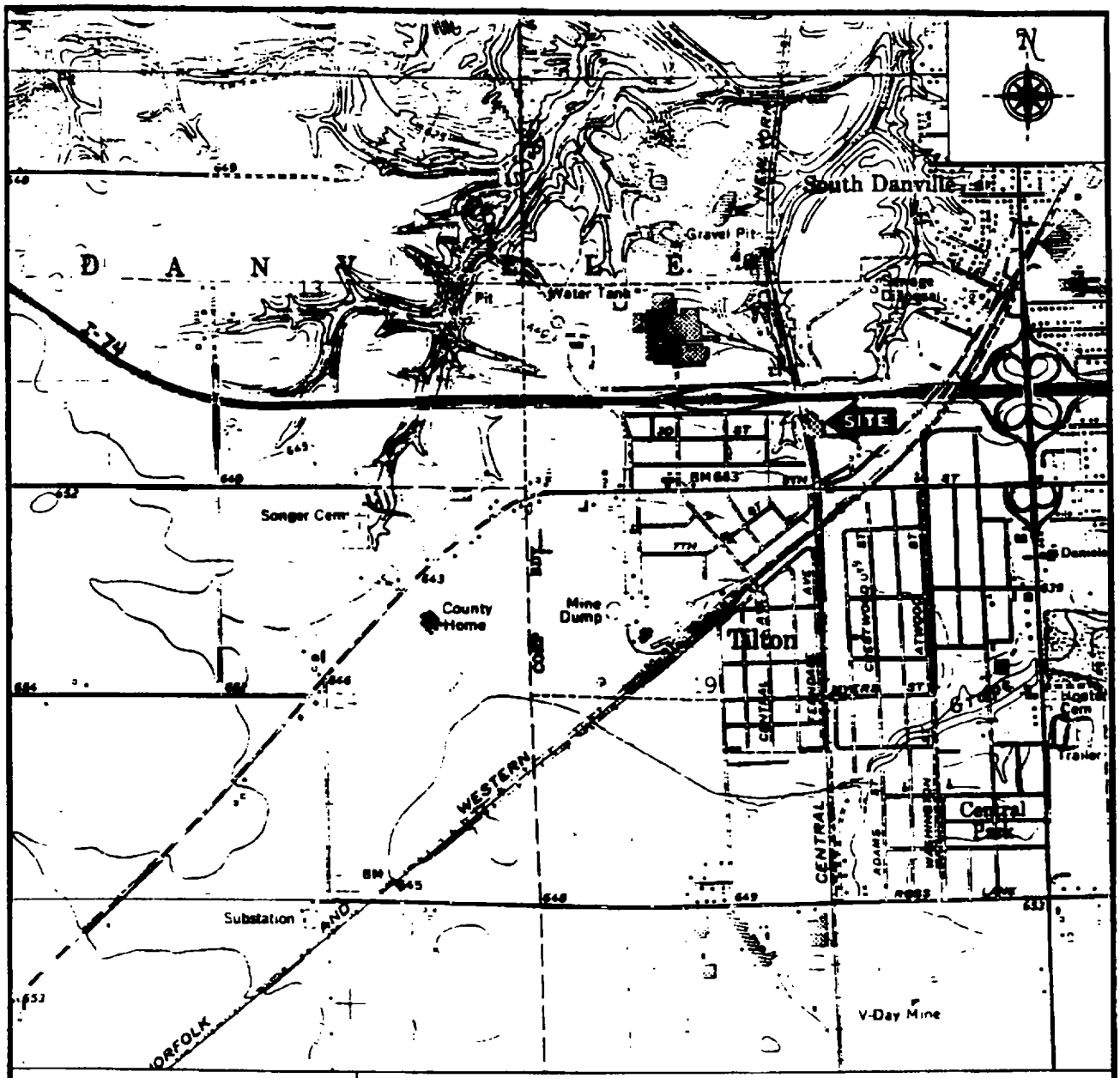
TILTON PLATING SITE

ENFORCEMENT CONFIDENTIAL ADDENDUM

1 PAGE

REDACTED

NOT RELEVANT TO THE SELECTION OF REMOVAL ACTION



Quadrangle Location

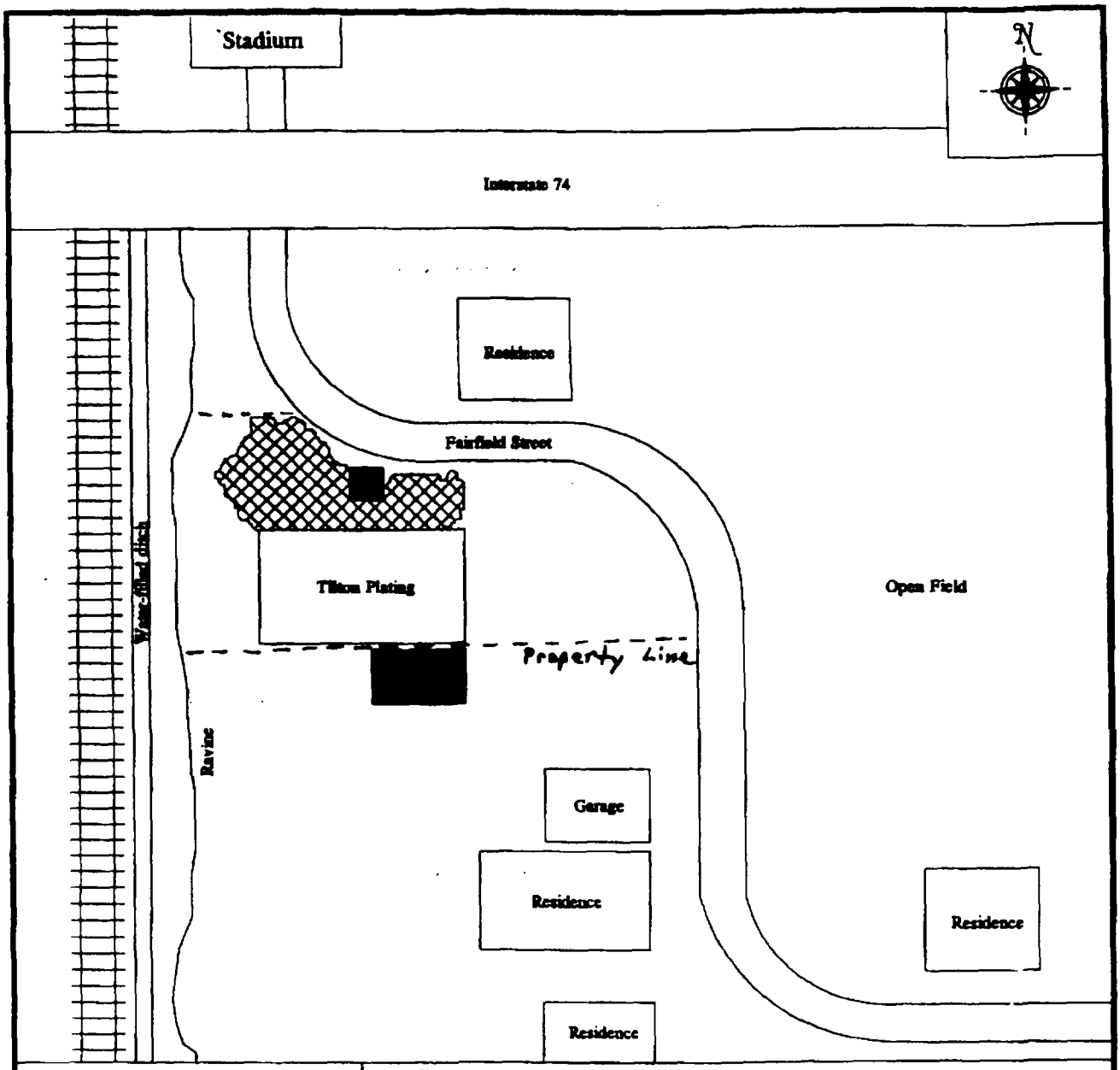
Illinois

ecology and environment, inc.

Superfund Technical Assessment And Response Team - Region 5

33 North Dearborn Street, Chicago, Illinois 60602

TITLE: Site Location Map		FIGURE: 2-1
SITE: Tilton Plating		SCALE: 1:24,000
CITY: Tilton	STATE: Illinois	TDD: S05-9809-012
SOURCE: USGS Topographic Map 7.5 minute Series Danville, Illinois SW Quadrangle		DATE: 1966

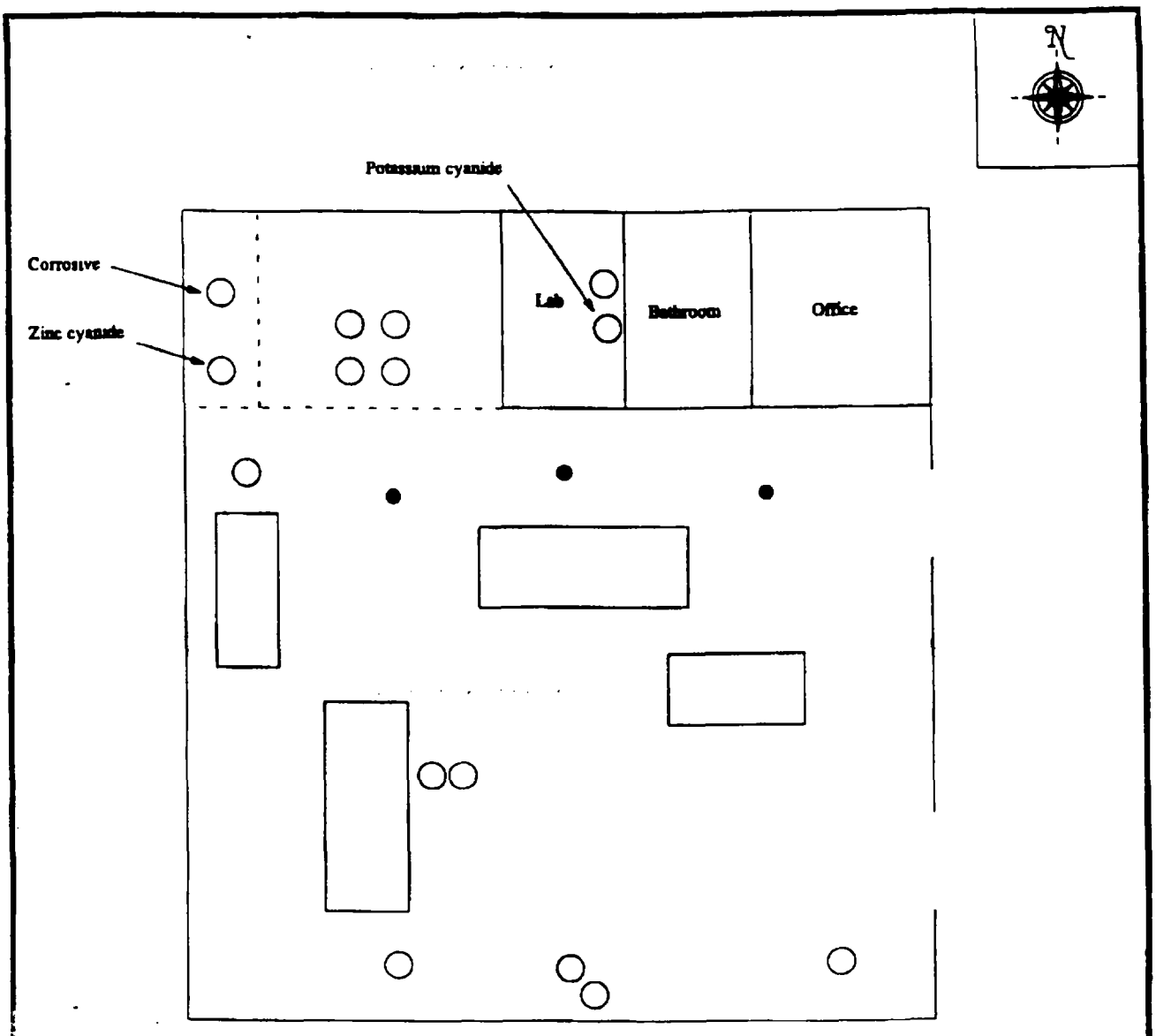


ecology and environment, inc.

Superfund Technical Assessment And Response Team - Region 5

33 North Dearborn Street, Chicago, Illinois 60602

TITLE	Site Features Map	FIGURE	2-2
SITE	Tilton Plating	SCALE	Not to scale
CITY	Tilton	STATE Illinois	TDD S05-9809-012
SOURCE	Ecology and Environment, Inc.	DATE	October 6, 1998



Legend

Vat

Drum

Floor drain

Unfinished wall

ecology and environment, inc.

Superfund Technical Assessment And Response Team - Region 5

33 North Dearborn Street, Chicago, Illinois 60602

TITLE: Building Features Map	FIGURE: 3-1
SITE: Tilton Plating	SCALE: Not to scale
CITY: Tilton STATE: Illinois	TDD: S05-9809-012
SOURCE: Ecology and Environment, Inc.	DATE: October 6, 1998

AR

ATTACHMENT 3

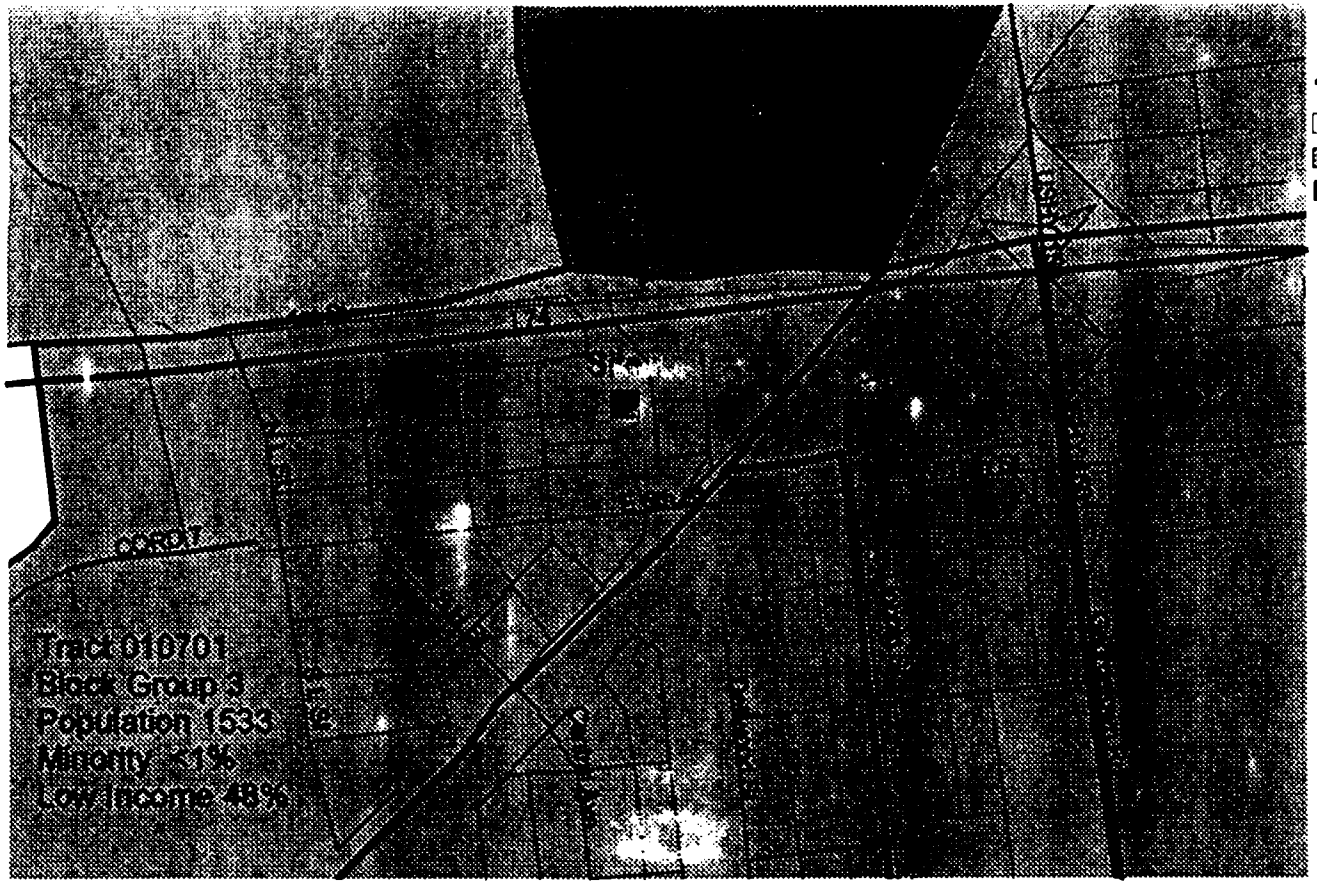
U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR
TILTON PLATING SITE
TILTON, VERMILION COUNTY, ILLINOIS

ORIGINAL
NOVEMBER 25, 1998

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	09/18/98	Range, L., IEPA	File	Memorandum: September 15, 1998 Site Inspection at the Tilton Plating Site	4
2	09/21/98	Everetts, B., IEPA	Bruce, D., U.S. EPA	FAX Transmission re: IEPA's Request for Assignment of U.S. EPA On-Scene Coordinator and Summary of the September 15, 1998 Site Visit for the Tilton Plating Company Site	4
3	00/00/00			Site Assessment Report for the Tilton Plating Site **(PENDING)**	
4	00/00/00	Nolan, C., U.S. EPA	Muno, W., U.S. EPA	Action Memorandum: Request for an Emergency Removal Action at the Tilton Plating Site **(PENDING)**	

Region 5 Superfund EJ Analysis
Tilton Plating Site, Tilton, IL



EJ Identification

- Census Block Group Boundary
- Low Income and Minority Less than State Average
- Low Income or Minority at or Greater than State Average
- Low Income or Minority 2 Times or Greater than State Average

Illinois Statewide Percentages:
Low Income 27%
Minority 25%

Region 5 EJ Criteria for Illinois:
EJ Low Income 54%
EJ Minority 50%

0.07 0 0.070.14 Miles

Latitude 40.06.12 Longitude 87.38.44

Date of Map 10/8/98
Source of Map 1990 Census Database